



Inside the ALPO Member, section and activity news

New E-mail Address for Walter Haas

Following separate e-mail communications from our own Matt Will and Robert Garfinkle, we are pleased to report that our Executive Director Emeritus Walter Haas continues to do well and is in good health.

Says Robert after a recent phone conversation with him, "Walter is doing fine and at 96-years of age, has no life-threatening illnesses. He is now in an assisted living facility in Las Cruces and no longer has an internet connection. But please feel free to send him a message via his daughter Mary Alba. He wants to hear from other ALPO members. In fact, he told me that the Astronomical League will be holding their meeting in Las Cruces in two years and he is looking forward to seeing many of us then."

Both Matt Will and Robert stated that Walter's daughter, Mary, will print out your messages and give them to her dad.

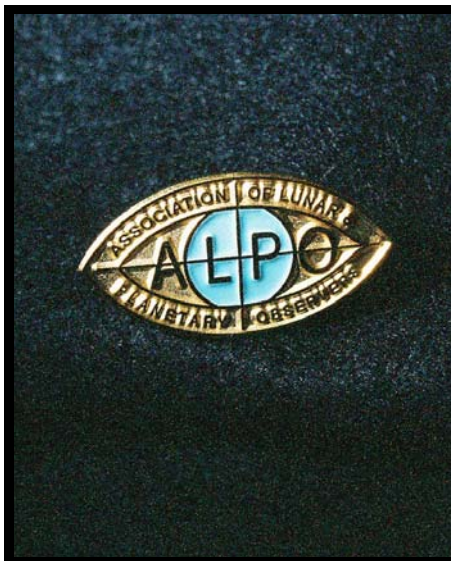
You can reach Mary (and Walter) at dmvalba@hotmail.com.

ALPO 2014 Conference

As of this writing (mid-December 2013), no decision has yet been reached on the location of the ALPO conference for 2014.

Either of two venues is being considered:

- The Pisgah Astronomical Research Institute (PARI) near Brevard, North Carolina, July 31 to August 2. A background story on this extremely fascinating and beautiful facility appeared in the September issue of Sky & Telescope magazine. More at <http://www.pari.edu/>
- As part of ALCon 2014 in San Antonio, Texas, July 9 thru 12.



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Send orders to: ALPO, PO Box 13456, Springfield, IL 62791-3456. E-mail to: matt.will@alpo-astronomy.org

More at <http://www.astroleague.org/content/alcon-2014-san-antonio-tx-july-9-12>

Full details will be announced in JALPO56-2 to be issued in mid-March.

Huge Meteorite Pulled from Russian Lake

From the Sky & Telescope website

After spending most of the past year searching, divers on October 16 finally brought a half-ton fragment of the Chelyabinsk meteorite up from the murky bottom of Russia's Lake Chebarkul and onto dry land.

More at <http://www.skyandtelescope.com/news/Huge-Meteorite-Pulled-from-Russian-Lake-228116691.html>

ALPO Interest Section Reports

Web Services

Larry Owens, section coordinator
Larry.Owens@alpo-astronomy.org

Follow us on Twitter, become our friend on FaceBook or join us on MySpace.

Section Coordinators: If you need an ID for your section's blog, contact Larry Owens at larry.owens@alpo-astronomy.org

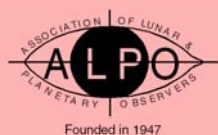
For details on all of the above, visit the ALPO home page online at www.alpo-astronomy.org

Computing Section

Larry Owens, section coordinator
Larry.Owens@alpo-astronomy.org

Important links:

- To subscribe to the ALPOCS yahoo e-mail list, <http://groups.yahoo.com/group/alpocs/>
- To post messages (either on the site or via your e-mail program), alpocs@yahoogroups.com
- To unsubscribe to the ALPOCS yahoo e-mail list, alpocs-unsubscribe@yahoogroups.com



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- Visit the ALPO Computing Section online at www.alpo-astronomy.org/computing

Lunar & Planetary Training Program

Tim Robertson,
section coordinator
cometman@cometman.net

Those interested in this VERY worthwhile program (or even those who wish to brush up on their skills) should contact Tim Robertson at the following addresses:

Timothy J. Robertson
ALPO Training Program
195 Tierra Rejada #148
Simi Valley, California 93065

Send e-mail to:
cometman@cometman.net

Please be sure to include a self-addressed stamped envelope with all correspondence.

For information on the ALPO Lunar & Planetary Training Program, go to:
www.cometman.net/alpo/

ALPO Observing Section Reports

Mercury / Venus Transit Section

John Westfall, section coordinator
johnwestfall@comcast.net

Visit the ALPO Mercury/Venus Transit Section online at www.alpo-astronomy.org/transit

Historical Section Staff Change

After many years of activity with both the ALPO and the BAA, our valued friend and member Richard Baum, now age 83, is retiring from his position as coordinator of the ALPO Historical Section.

The ALPO board of directors has approved Tom Dobbins, currently assistant coordinator, to become coordinator effective the beginning of the 2014 calendar year.

This will be Tom's third stint with the ALPO Historical Section. He was a co-coordinator from October 1999 through April 2001, and then assistant coordinator from February 2002 to present. Part 2 of Tom's paper on planetary telescopes appears in this issue of the ALPO Journal.

Richard Baum was appointed the ALPO Historical Section coordinator in February 2001, after having served as the ALPO Mercury Section coordinator from December 1977 through

June 1996. He received the ALPO Walter H. Haas Observer Award in 2005.



Richard was director of the British Astronomical Assn's Terrestrial Planets Section from 1975-91, then director of its Mercury and Venus Section in 1991, then vice president of the BAA 1993-94.

He was awarded its Lydia A Brown medal for meritorious service to the BAA in 1988, and in 2006 the BAA's highest award, the Walter Goodacre medal.

Even with his leaving an official position in the ALPO, Richard retains an interest in the history of lunar and planetary work.

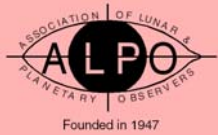
He has published papers in our own Journal of the ALPO, the Journal of the BAA, the Journal for the History of Astronomy; *Sky & Telescope* magazine, *Astronomy Now*, and *Urania* (Spain) and other publications. The Yearbook of Astronomy (regularly) and chapters to multi-authored publications.

He is the author of "The Planets: Some Myths and Realities" (1973), "In Search of Planet Vulcan, the ghost in Newton's clockwork universe" (with W J Sheehan) (1997), and "The Haunted Observatory" (2007). Richard has also contributed chapters to part publications. He has many biographical entries to The Biographical Encyclopedia of Astronomers (Springer) and Dictionary of Nineteenth Century British Scientists (4 vols. 2004).

Participated in *Vulcan* episode of Arthur C Clarke's *Mysterious World* TV series (1980) filmed in situ in France.

He recently completed a 17,000-word essay "Before Lunik: Imagination and the Other Side of the Moon" (now in peer reviewed by the BAA).





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Meteors Section

Robert Lundsford,
section coordinator
lunro.imo.usa@cox.net

Visit the ALPO Meteors Section online at www.alpo-astronomy.org/meteorblog/ Be sure to click on the link to viewing meteors, meteor shower calendar and references.

Meteorites Section

Report by Dolores H. Hill,
section coordinator
dhill@lpl.arizona.edu

There were no new observations submitted for this period. We invite submissions to the Chelyabinsk Project and suggestions for new projects involving meteorites.

According to Dirk Ross (<http://lunarmeteoritehunters.blogspot.jp/2013/11/mbiq-detects-ca-meteor-06nov2013.html>), several bright possible meteorite-dropping fireballs were observed in the far western U.S. on September 16 and November 2, November 15 in the Midwest, and sightings from Oklahoma, Texas, Kansas, Missouri, Colorado, New Mexico November 16th. Fireballs in other regions include Bosnia on October 10th and November 1, and the November 15th bolide seen in Japan. None of these resulted in retrieval of meteorites by experienced meteorite hunters.

The Meteoritical Bulletin reported 230 new meteorite classifications approved by the Meteoritical Society's Nomenclature Committee since September 2013.

While most of these are meteorite finds from Northwest Africa (NWA), recovery of an April 23, 2013 fall from Germany was noted.

Eclipse Section

Report by Mike Reynolds, section coordinator, m.d.reynolds@fscj.edu

18 October 2013 Penumbral Lunar Eclipse



A relatively-deep penumbral lunar eclipse was visible for a number of observers on the evening of 18 October 2013. This eclipse was the 52nd member of Saros 117, a 71-eclipse series in a sequence of 8 penumbral, 9 partial, 24 total, 7 partial, and 23 penumbral lunar eclipses (Espenak and Meeus, 2009). Saros 117 is now in its final penumbral lunar eclipse sequence. Several ALPO observers have sent preliminary reports. If you observed the eclipse, please send your information for inclusion so a final report may be issued.

3 November 2013 Solar Eclipse



The last eclipse of 2013 was a rare hybrid solar eclipse. With hybrid eclipses, part of the path sees an annular solar eclipse, whereas part of the path a total solar eclipse. This eclipse is the 23rd of Saros 143, which began 7 March 1617 and will end 23 April 2897. Saros 143 will see in sequence 10 partial, 12 total, 4 hybrid, 26 annular, and 20 partial eclipses (Espenak and Meeus, 2006). This was the first of four hybrids in Saros 143.

Please visit the ALPO Eclipse Section online at www.alpo-astronomy.org/eclipse

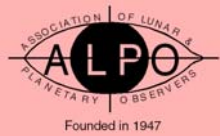
This was the "Braunschweig" L6 ordinary chondrite with fragments totaling 1300g. <http://www.lpi.usra.edu/meteor/metbull.php?code=58083>

Visit the ALPO Meteorite Section online at www.alpo-astronomy.org/meteorite/

Comets Section

Report by Carl Hergenrother,
acting assistant section coordinator
chergen@lpl.arizona.edu

As 2013 draws to a close, the eyes of the comet world have been on comet C/2012 S1 (ISON) and its grazing passage of the Sun. For more on ISON, please see this issue's Feature Story.



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ISON has not been the only comet of interest lately. For a few weeks in November up to 5 comets were visible in small binoculars from dark sites. Periodic comet 2P/Encke peaked around magnitude 7 prior to its late November perihelion. Long-period comet C/2012 X1 (LINEAR) and newly discovered medium-period comet C/2013 V3 (Nevski) experienced multi-magnitude outbursts which brightened each comet to 8th and 9th magnitude, respectively. Finally, C/2013 R1 (Lovejoy) is giving ISON a run for the comet of the season as a borderline naked eye comet of 4-5th magnitude with a 2+ degree long tail visible in small telescopes.

The new year will bring many comet observing opportunities (with the discovery of new bright comets likely). As of this writing, no one is certain whether ISON will still be observable into 2014, but Lovejoy will start the year around 5-6th magnitude and still be visible in small telescopes (brighter than 10th magnitude) till March.

Three additional long-period comets are expected to become brighter than 7th magnitude in 2014. Comet C/2012 K1 (PANSTARRS) will reach perihelion on August 27 at a distance of 1.05 AU from the Sun. Starting the year at 13th magnitude, the comet will brighten to 7th magnitude in June and July before passing solar conjunction (unfortunately on the far side of the Sun). When the comet emerges from the glare of the Sun in September it will be a 6th magnitude object only observable from the Southern Hemisphere. PANSTARRS should still be around 9th magnitude by the end of the year.

Our next comet was discovered only a few weeks ago (Nov. 12 UT) by Michael Ory at the Oukaimeden Observatory in Morocco at 18th magnitude. Comet C/2013 V5 (Oukaimeden) will reach



Comet C/2013 R1 (Lovejoy) as imaged by John Sabia at the Thomas G. Cupillari Observatory, Fleetville (north of Scranton), PA, USA, November 4, 2013, 08:18:36 UT. Equipment: 20 in. (0.5 m) f/8.1 RC Optical Systems Ritchey-Chrétien telescope with SBIG STL-1001E CCD camera; image 1 x 60 seconds. No other data provided.

perihelion on October 2 at a distance of 0.66 AU from the Sun. It is too early to sure, but the comet should be brighter than 10th magnitude by August and as bright as 5-6th magnitude in late September when it passes within 0.46 AU of Earth. Northern hemisphere observers will lose sight of the comet in mid-September but Southern observers will still be able to follow it into October.

Back in early October, Comet ISON made the news as it came close enough to Mars to allow NASA's Mars orbiting spacecraft to image it. Comet C/2013

A1 (Siding Spring) will pass even closer to Mars on October 19, 2014. Definitely expect to hear about this comet in the news as its ~150,000 km flyby of Mars will result in some high-resolution imaging. For us on Earth the comet should be a 7th magnitude object around its October 2 perihelion ($r = 1.40$ AU from the Sun). Again Southern observers will see this comet at its best as it will only become observable for Northern observers in November.

The next two comets may not become brighter than 10th magnitude but are



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worth mentioning. Short-period comet 209P/LINEAR will pass within 0.06 AU of Earth in late May at ~10-11th magnitude. Dust released by LINEAR during past orbits may result in a significant meteor shower on the night of

May 24, 2014. The final comet is currently not a comet at all. Asteroid 2013 UQ4 was discovered by the Catalina Sky Survey on a very comet-like orbit with a period of hundreds of years. There is a good chance this asteroid is a

comet that has either not turned on yet or its cometary activity is too weak to be seen. With its closest approach to the Sun on July 5 (1.08 AU) and to the Earth on July 10/11 (0.31 AU), 2013 UQ4 will be magnitude 12.9 if it remains inactive and possibly many magnitudes brighter if active.

As always, the ALPO Comet Section thanks those who have sent observations during 2013 and solicit new images, drawings and magnitude estimates during the coming year.

The ALPO Comet Section solicits all observations of comets, including drawings, magnitude estimates, images and spectra. Drawings and images of current and past comets are being archived in the ALPO Comet Section image gallery at http://www.alpo-astronomy.org/gallery/main.php?g2_itemId=4491

Please send all observations and images to Carl Hergenrother at the e-mail address shown at the beginning of this section report.

Visit the ALPO Comets Section online at www.alpo-astronomy.org/comet

Solar Section

Report by Kim Hay,
section coordinator
kim.hay@alpo-astronomy.org

The main news about the Sun lately is that it is expected to flip its polarity before the end on 2013, according to a report from NASA

http://science.nasa.gov/science-news/science-at-nasa/2013/05aug_fieldflip

The Sun has gone through some very cyclical events since our last report. In our last report, we were at Carrington

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Rotation CR2137 and currently we are at CR2144.

During Cycle 24, solar southern hemisphere group counts were very low, but activity peaked on June 17 with the appearance of AR1175. Solar activity waned in July with no groups or sunspots and in September with no major flare activity. October and November had increased activity; in October, the far side of the Sun was very active, while the Earth-facing side was quiet.

Cycle 24 is being forecasted as the weakest solar cycle in the last 100 years. There are predictions that there will be a double peak, but the second peak has not yet arrived.

Keep up-to-date on Daily Space weather news at www.spaceweather.com

A chart of reported sunspot groups with flare activity and auroras that have transpired over the last 5.5 months accompanies this report.

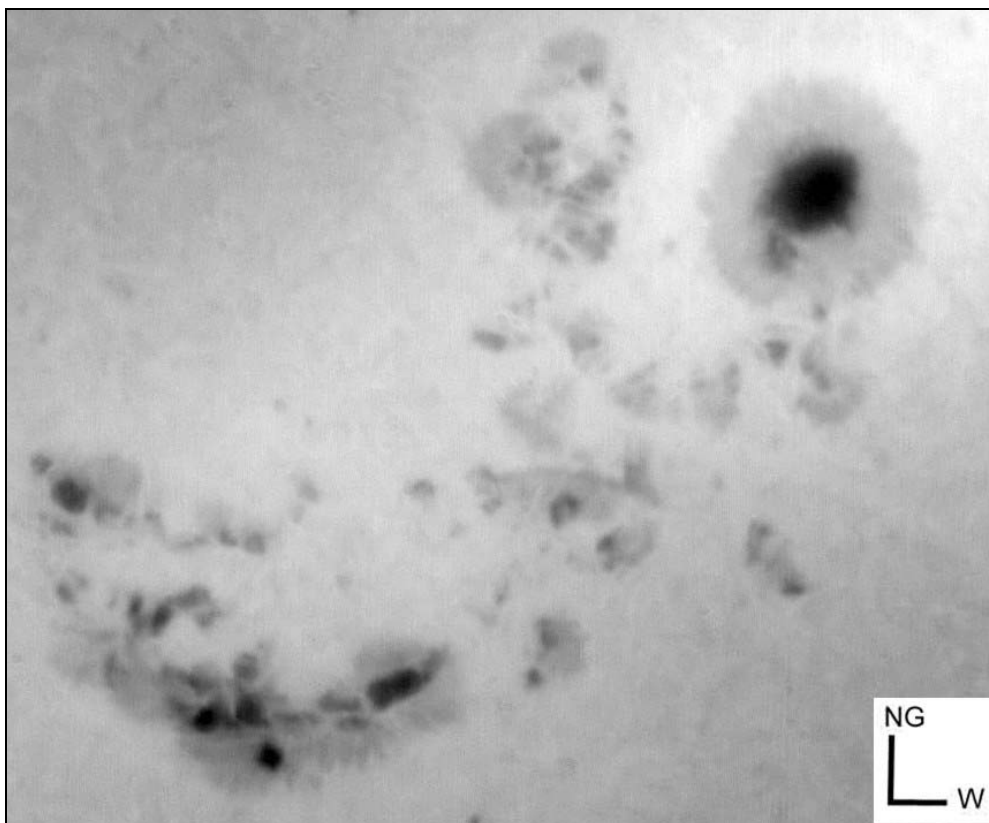
If you are wondering how intense these flares are, visit <http://www.swpc.noaa.gov/NOAAscales/index.html#GeomagneticStorms> There, you'll see the NOAA Space Weather Scale of the Flare activity.

There was a partial solar eclipse on November 3, 2013, which most of the eastern U.S. & Canada saw a portion. {Editor's Note: See also the ALPO Eclipse Section report by Mike Reynolds earlier in this section.} We (about midway between Toronto and Montreal, Canada) saw a small bite taken out of the southern part of the Sun after the clouds

Sunspot AR1890, one of the biggest Sunspots of Cycle 24, as imaged by ALPO member Jean-françois Coliac on November 7, 2013, 13:31 UT. Equipment: 120mm, f/7.5 refractor with 3x Barlow, -PL1M-W21. No further location or other details provided.



Partial solar eclipse imaged by Kim Hay at the Starlight Cascade Observatory, Yarker, Ontario, Canada. Image is clip from a movie using a Sony Handycam DCR-SX45. A small baader film filter was built using a plastic slide holder and attached with velcro over the lens.





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disappeared. Temperatures were at -3°C (27°F), and windy on top of the Yarker, Ontario, ball diamond, but it was worth the viewing the Sun.

More exciting news is that two comets crashed into the Sun in August, and now we have two more comets heading towards the Sun — Comet Encke and Comet ISON. On November 21, the SDO and SOHO satellites caught images of both comets heading towards the Sun. ISON was due to arrive on November 28. By the time you read this, we'll have found out if survived and came out from around the other side of the Sun, and put on a western display in the sky.

There is a new book out by member Jamey L. Jenkins, *Observing the Sun- A Pocket Field Guide*, published by Springer and available at Amazon.com in hardbound and true electronic version. This is on my own book wish list.

If you're interested in a newsletter on solar activity called STCE (published by The Solar-Terrestrial Centre of Excellence), you can find it online at <http://www.stce.be/newsletter>

Keep up-to-date on the latest images and chats on solar activity by subscribing to the ALPO Solar Section e-mail list at <http://groups.yahoo.com/neo/groups/Solar-ALPO/info>. There are currently 320 members. We do collect images for archiving purposes. These can be up to 250 kb file of in either jpg or gif file format. They will be included in a Carrington Rotation set. Please include all observing equipment used, the Carrington Number, date, Universal Time of the image, and directions with North up. Looking forward to seeing your images and sketches.

We are always looking for members to submit an article to the JALPO on solar imaging and solar phenomena. Please

send to myself (kim.hay@alpo-astronomy.org) or to Ken Poshedly (ken.poshedly@alpo-astronomy.org)

For information on solar observing – including the various observing forms and information on completing them – go to www.alpo-astronomy.org/solar

Mercury Section

Report by Frank J. Melillo,
section coordinator
frankj12@aol.com

Visit the ALPO Mercury Section online at www.alpo-astronomy.org/mercury

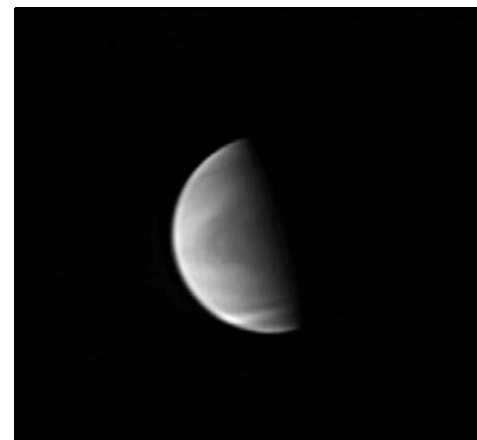
Venus Section

Report by Julius Benton,
section coordinator
jlbaina@msn.com

Venus reached greatest elongation on November 1 at apparent visual magnitude -4.5 and situated 47° east of the Sun, well-placed in the southwestern sky after sunset and reaching maximum brightness for the 2013-14 Eastern (Evening) Apparition on December 6th.

Venus is passing through its waning phases (a progression from fully illuminated through crescentic phases) as observers witness the leading hemisphere of Venus at the time of sunset on Earth.

The accompanying table of Geocentric Phenomena in Universal Time (UT) is presented here for the convenience of observers for the 2013-14 Eastern



Anthony Wesley of Murrumbateman, Australia, obtained this superb image of Venus at UV 350nm on October 12, 2013, at 07:18UT using a 36.8 cm (14.5 in.) Newtonian in good seeing nearly three weeks from predicted dichotomy. The bright limb band and radial and banded dusky markings are apparent. Apparent diameter of Venus is $20.3''$, phase (k) 0.587 (58.7% illuminated), and visual magnitude -4.3 . South is at top of image.

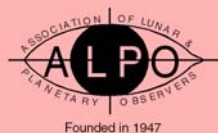
(Evening) Apparition for planning purposes.

So far, the ALPO Venus Section has amassed over 200 drawings and images of Venus for the current observing season.

Observers are again reminded that images are important and still needed by the Venus Express (VEX) mission, which started systematically monitoring Venus at UV, visible (IL) and IR wavelengths back in May 2006.

Geocentric Phenomena of the 2013-2014 Eastern (Evening) Apparition of Venus in Universal Time (UT)

Superior Conjunction	2013	Mar 28 ^d (angular diameter = 9.8 arc-seconds)
Predicted Dichotomy		Oct 31.14 (exactly half-phase predicted)
Greatest Elongation East		Nov 01 (Venus will be 47° east of the Sun)
Greatest Illuminated Extent		Dec 06 ($m_v = -4.9$)
Inferior Conjunction	2014	Jan 10 (angular diameter = $63.1''$)



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Lunar Calendar for First Quarter 2014 (All Times UT)

Jan	01	11:14	New Moon
	01	21:00	Moon Perigee: 356900 km
	08	03:39	First Quarter
	09	11:26	Moon Descending Node
	13	08:14	Moon North Dec.: 19.5° N
	16	01:53	Moon Apogee: 406500 km
	16	04:52	Full Moon
	23	06:29	Moon-Mars: 3.9° N
	23	09:22	Moon-Spica: 1.4° S
	24	02:55	Moon Ascending Node
	24	05:19	Last Quarter
	25	14:18	Moon-Saturn: 0.6° N
	27	16:31	Moon South Dec.: 19.4° S
	29	02:36	Moon-Venus: 2.2° N
30	09:58	Moon Perigee: 357100 km	
30	21:38	New Moon	
Feb	05	12:41	Moon Descending Node
	06	19:22	First Quarter
	08	14:41	Moon-Aldebaran: 2.6° S
	09	15:21	Moon North Dec.: 19.3° N
	12	05:09	Moon Apogee: 406200 km
	14	23:53	Full Moon
	19	14:54	Moon-Spica: 1.7° S
	19	23:59	Moon-Mars: 3.3° N
	20	03:29	Moon Ascending Node
	21	22:39	Moon-Saturn: 0.3° N
	22	17:15	Last Quarter
	24	01:24	Moon South Dec.: 19.2° S
	26	05:23	Moon-Venus: 0.4° S
	27	19:52	Moon Perigee: 360400 km
27	21:24	Moon-Mercury: 2.8° S	
Mar	01	08:00	New Moon
	04	17:45	Moon Descending Node
	07	22:07	Moon-Aldebaran: 2.3° S
	08	13:27	First Quarter
	08	22:54	Moon North Dec.: 19.1° N
	11	19:46	Moon Apogee: 405400 km
	16	17:08	Full Moon
	18	20:38	Moon-Spica: 1.8° S
	19	03:14	Moon-Mars: 3.4° N
	19	06:30	Moon Ascending Node
	21	03:40	Moon-Saturn: 0.2° N
	23	07:28	Moon South Dec.: 19° S
	24	01:46	Last Quarter
	27	09:52	Moon-Venus: 3.6° S
27	18:30	Moon Perigee: 365700 km	
30	18:45	New Moon	

Table courtesy of William Dembowski and NASA's SkyCalc Sky Events Calendar

This Professional-Amateur (Pro-Am) effort continues, and observers should submit images to the ALPO Venus Section as well as to the VEX website at:

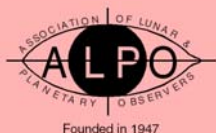
<http://sci.esa.int/science-e/www/object/index.cfm?objectId=38833&fbodlongid=1856>.

Regular Venus program activities (including drawings of Venus in Integrated Light and with color filters of known transmission) are also valuable throughout the period that VEX is observing the planet.

On November 19, 2010 ESA's Science Program Committee approved the extension of VEX mission operations until December 31, 2014, so Pro-Am cooperation fortunately continues this apparition.

The observation programs conducted by the ALPO Venus Saturn Section are listed on the Venus page of the ALPO website at <http://www.alpo-astronomy.org/venus> as well as in considerable detail in the author's ALPO Venus Handbook available from the ALPO Venus Section. Observers are urged to carry out digital imaging of Venus at the same time that others are imaging or making visual drawings of the planet (i.e., simultaneous observations).

Although regular imaging of Venus in both UV, IR and other wavelengths is extremely important and highly encouraged, far too many experienced observers have neglected making visual numerical relative intensity estimates and reporting visual or color filter impressions of features seen or suspected in the atmosphere of the planet (for instance, categorization of dusky atmospheric markings, visibility of cusp caps and cusp bands, measurement of cusp extensions, monitoring for the Schröter phase effect



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near the date of predicted dichotomy, and looking for terminator irregularities).

Routine use of the standard ALPO Venus observing forms will help observers know what needs to be reported in addition to supporting information such as telescope aperture and type, UT date and time, magnifications and filters used, seeing and transparency conditions, etc.

The ALPO Venus Section urges interested readers worldwide to join us in our projects and challenges ahead.

Individuals interested in participating in the programs of the ALPO Venus Section are encouraged to visit the ALPO Venus Section online <http://www.alpo-astronomy.org/venusblog/>

Lunar Section

Lunar Topographical Studies / Selected Areas Program
Report by Wayne Bailey,
program coordinator
wayne.bailey@alpo-astronomy.org

The ALPO Lunar Topographical Studies Section (ALPO LTSS) received a total of 135 new observations from 12 observers during the July-September quarter.

One contributed article was published in addition to numerous commentaries on images submitted.

The *Focus-On* series in this section's newsletter *The Lunar Observer* continued with an article on lunar domes and Mons Rumker. Upcoming *Focus-On* subjects will include Schickard-Wargentin, Aristarchus and Mare Frigoris.

NASA launched the LADEE (Lunar Atmosphere and Dust Environment Explorer) from the Mid-Atlantic Regional Spaceport at the Wallops Island Flight Facility on Sept. 6. It is now in lunar orbit and spacecraft commissioning activities are complete.

Lunar Section Staff Addition

The ALPO welcomes Jerry Hubbell as its newest staff member, specifically acting assistant coordinator of the Lunar Topographical Studies & Selected Areas Program. The selection was made by program coordinator Wayne Bailey and increases that program's staff to three persons, including assistant coordinator William Dembowski.

Jerry's duties will include the following;

- Serve as the primary person responsible preparing observations for archiving and entering them into the archive.
- Be a second point for receiving observations (in addition to Wayne).
- Have alternate responsibility for preparing "Focus On" articles for the *The Lunar Observer*



newsletter and also this Journal.
• Take the lead role for either the Banded Craters or the Bright Lunar Rays sub-program.

Regarding his astronomy interests, Jerry says, "I have been an amateur astronomer since I was 14 with a keen interest in the Moon and in observing Jupiter and Saturn. I have been a visual observer using various refractors and my 10" Meade 2120 LX5 since 1987. I became keenly interested in astrophotography in 2008 and have been learning and practicing high-resolution lunar imaging and minor planet observing since 2010."

He obtained his Minor Planet Center Observatory code (I24) in 2010, has been a member of the

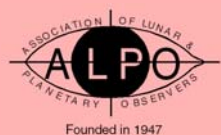
AAVSO and the ALPO since 2010.

Jerry has contributed several lunar observations (images) to *The Lunar Observer* newsletter over the past three years and also has made nearly 100 minor planet observations and submitted them to the Minor Planet Center (MPC). His book *Scientific Astrophotography: How Amateurs Can Generate and Use Professional Imaging Data* was published by Springer Books in November 2012.

Professionally, Jerry starts a new position as vice president of engineering at Explore Scientific; he has over 32 years in the nuclear and utility industry and only recently left his position as a Nuclear Instrumentation & Controls and Software Engineer in the Nuclear Design Engineering group at Dominion (Virginia Power) to join Explore Scientific. At his new job, Jerry will be working on new product development and engineering program development and implementation.

Instrument commissioning and the Lasercom primary experiment were expected to be completed in mid-November. The spacecraft will then drop down to the lower lunar science orbit.

More information can be found at the LADEE website provided in the next page.



Inside the ALPO Member, section and activity news

Phillip M. Morgan, a longtime contributor to the ALPO Lunar Section and the BAA and one of our most active visual lunar observers passed away on July 25, 2013. He died peacefully, after a long illness, at age 64.

Mr. Morgan was a prolific contributor to the ALPO Lunar Section. In addition to his drawings, executed in a stipple technique, he also contributed a short tutorial on lunar drawing to the April 2009 issue of the ALPO Lunar section newsletter, "The Lunar Observer".

Despite his illness, which he never mentioned, he continued observing. His most recent contribution was received in March. Phil was a livestock farmer in Worcestershire, England, a very demanding job, so it's remarkable that he found so much time for observing.

He will be missed.

Visit the following online web sites for more info:

- ALPO Lunar Topographical Studies Section
moon.scopesandscapes.com/alpo-topo
- ALPO Lunar Selected Areas Program
moon.scopesandscapes.com/alpo-sap.html
- The Lunar Observer (current issue)
moon.scopesandscapes.com/tlo.pdf
- The Lunar Observer (back issues)
moon.scopesandscapes.com/tlo_back.html
- Banded Craters Program:
moon.scopesandscapes.com/alpo-bcp.html
- The Lunar Discussion Group:
tech.groups.yahoo.com/group/Moon-ALPO/

- The Moon-Wiki: the-moon.wikispaces.com/Introduction
- Chandrayaan-1 M3: pds-imaging.jpl.nasa.gov/portal/chandrayaan-1_mission.html
- LADEE: www.nasa.gov/mission_pages/ladee/main
- LROC: roc.sese.asu.edu/EPO/LROC/lroc.php
- GRAIL: http://www.nasa.gov/mission_pages/grail/main/

Lunar Meteoritic Impacts

Brian Cudnik,
program coordinator

cudnik@sbcglobal.net

Please visit the ALPO Lunar Meteoritic Impact Search site online at www.alpo-astronomy.org/lunar/lunimpacts.htm.

Lunar Transient Phenomena

Report by Dr. Anthony Cook,
program coordinator

tony.cook@alpo-astronomy.org

Four Lunar Transient Phenomena (LTP) observations have come to light since the last LTP report and have been assigned weights on a scale of 1 (slight chance of being an LTP) to 5 (unquestionably a LTP). All but one lie at the weight 1 level and possibly have non-lunar origins as explained in "The Lunar Observer" (TLO) newsletters from May 2013 to Oct 2013. Nevertheless, it would be useful if observers could please check their images for these areas, at these dates and times.

- Aristarchus: 2013 Mar 29 UT 02:15-02:39 Mike Pyka (Katowice, Poland) noticed the crater to be strongly bright, perhaps more so visually than with a CCD. ALPO/BAA weight=1.
- Aristarchus: 2013 Apr 22 UT 01:39-02:37 Paul Zeller (Indianapolis, USA) observed visually

two closely spaced NW wall dark bands to have a rusty-red hue. The color of these bands did not change over the period of the observing session. ALPO/BAA weight=2.

- Jansen D: 2013 Aug 23 UT 00:30-01:30 Peter Grego (Cornwall, UK) sketched a dusky area just E of this crater. Simulations show a depression here, but the shading is of a different shape. ALPO/BAA weight=1.
- Hermann D: 2013 Sep 01 UT 02:48 Maximilian Teodorescu (LPOD observation, Romania) imaged a dusky circular area to the SE of Hermann D. There is no depression here. ALPO/BAA weight=1.

Four candidate LTP from 2013: Apr 25 (E. Limb), May 13 (Aristarchus), Jul 18 (Maginus), and Oct 14 (E Limb), did not make it onto the LTP list, for reasons explained in the monthly TLO newsletter. We are grateful for all candidate LTP observations submitted for study and hope that our feedback will make it easier for future observers to recognise false effects in optics, our atmosphere, and in CCD images, which might resemble LTPs.

We would like very much to encourage those with high resolution imaging expertise, to take part in repeat illumination observations, to help eliminate past LTP by re-observing under similar lighting conditions. Images obtained in this way can then undergo computer simulations for chromatic aberration, atmospheric spectral dispersion, and seeing blur, which might perhaps explain some past LTP reports. Astronomers: Jay Albert, Maurice Collins, and Brendan Shaw regularly contribute observations and images in this way.

Dates and UTs on which to see features under similar illumination conditions to past LTPs, can be found at <http://users.aber.ac.uk/atc/tlp/tlp.htm>



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Twitter LTP alerts are available at <http://twitter.com/lunarnaut>

Finally, please visit the ALPO Lunar Transient Phenomena site online at <http://users.aber.ac.uk/atc/alpo/ltp.htm>

Mars Section

**Report by Roger Venable,
section coordinator**
rjvmd@hughes.net

Mars is well positioned in the morning sky for observation now. Still appearing small, it was 5.6 arc-seconds in apparent diameter on December 1 and 6.9 arc-seconds on January 1. Despite this small size, outstanding images have been obtained by a number of observers. A striking finding so far is the reappearance of some dark albedo features that haven't been seen in years. (See accompanying images to this report on this page. South is at the top and planetary east [celestial west] is at the left in all images.)

For details on the sky location and expected appearance of Mars, review the "pre-apparition report" in JALPO Vol. 55, No. 4 (Autumn 2013).

Join us in the Mars observers group on Yahoo at groups.yahoo.com/neo/groups/marsobservers/info. Note that this is a new web address, as Yahoo has changed its group addresses. If you type into your browser the previous Mars observers group address, you will be automatically redirected to this new one.

Visit the ALPO Mars Section online and explore the Mars Section's recent observations: www.alpo-astronomy.org/mars

Minor Planets Section

**Frederick Pilcher,
section coordinator**
fpilcher35@gmail.com

Some highlights published in the *Minor Planet Bulletin*, Volume 40, No. 4, 2013 October - December, are hereby presented. These represent the recent

Figure 1. Composite RGB image made by Damian Peach on September 20, 2013, at 05:58 UT. The central meridian is 254 degrees. The left and right images are identical, the left one being included so as to show the features without interference by the arrows. Syrtis Major is the prominent dark area on the right (west) side of the image, while lapygia and the Mares Tyrrenum and Cimmerium areas comprise the dark areas across the top (south). The North Polar Cap is seen at the bottom. The arrows indicate unusual features. *A* is a dark streak across the Moeris Lacus and Nepenthes areas. *B* is combined Nubis Lacus and Nodus Laocoontis. *C* is Thoana Palus. These three areas have not been seen since the late 1900's, except that a very faint darkening in the area of *B* has been visible in recent apparitions. *D* is Nodus Alcyonius, which is relatively normal in appearance. *E* is an unusually light appearance of Umbra. It was bright in Damian's red image and absent in blue, suggesting that it is dust. This suggestion caused some disagreement and discussion among the Mars observers group. (Altitude 38 degrees, no other observing or equipment specifics provided.)

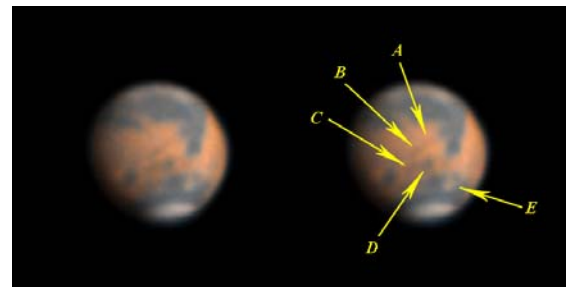


Figure 2. Composite RGB image made by Don Parker on November 8, 2013, at 10:31 UT. The central meridian is 204 degrees. The left and right images are identical, the left one being included so as to show the features without interference by the arrows. The bright central area is frost in Elysium, and a tiny dark spot in its center may be the summit of Elysium Mons. Mare Cimmerium is the large dark streak across the top (south) of the image. The arrows indicate unusual features. *A* is Pambotis Lacus, and *B* is the curved "Cyclopa" canal or "Cyclops." These two features have not been seen since the late 1900's. The dark Phlegra area is seen to be split into two parts: the eastern part (*C*) is the canal-like feature Hades I, while the western part (*D*) is the canal-like Styx. This change also has not been seen in a number of apparitions. *E* is Morpheos Lacus, which may be larger and darker than usual. (Newtonian reflector of 400 mm aperture at f/26, ASI 120 mm camera, stack of multiple images using Astrodon red, green, and blue filters. Seeing 3 to 4, transparency 4, altitude 47 degrees.)

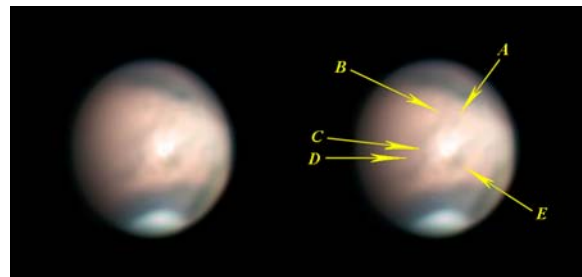
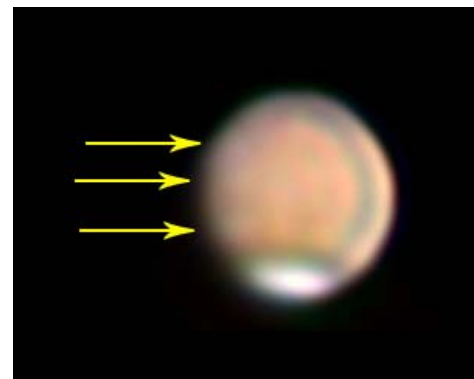


Figure 3. Composite RGB image made by Paul Maxson on October 12, 2013, at 12:50 UT. The central meridian is 141 degrees. This longitude of Mars often appears relatively featureless, because the dark albedo features are all very subtle. Unseen, Olympus Mons is right in the center of the image. The arrows point to three late afternoon clouds. The southernmost (the top one) is centered over Daedalia, the middle one over Tharsis, and the northernmost over the Tempe and Arcadia areas. The curved dark streak paralleling the right (western) edge of the image is a "ringing" artifact caused by contrast enhancement in image processing. (Dall-Kirkham reflector of 250 mm aperture at f/24, ASI 120 mm camera, stack of multiple red, green, and blue images.)





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achievements of the Minor Planets Section.

In the hours following the approach of 2012 DA14 within 34,000 kilometers of Earth, 2013 Feb. 15, Leonid Elenin and Igor Molotov, Keldysh Institute of Applied Mathematics, Russian Academy of Sciences, obtained a 10-hour lightcurve from their remotely operated observatory in New Mexico, USA. They found a rotation period of 9.5 hours and exceptionally large amplitude of 1.79 magnitudes. This complements a lightcurve covering the same time interval by Bruce L. Gary in Arizona.

Lorenzo Franco has published a complete spin-shape model for 38 Leda based on lightcurves at seven oppositions well-distributed around the sky. He finds a sidereal rotation period of 12.836164 +/- 0.000016 hours. The north rotational pole is near celestial longitude 160 degrees, latitude -17 degrees; or longitude 343 degrees, latitude -6 degrees.

As a note for general readers, the lightcurve inversion routine typically obtains two equally likely rotational poles at similar celestial latitudes but longitudes separated by about 180 degrees. Additional data, such as well-observed occultations, are commonly required to resolve this ambiguity. It should also be noted that the distinction between a "synodic rotation period" (all that can be found at a single opposition no matter how comprehensive are the data" and the "sidereal period" (which requires observations at several oppositions) as has been accomplished here.)

Linda French, Robert Stephens, and several colleagues have obtained rotation periods for 21 Trojan asteroids. These are identified in the tabulation below.

Lightcurves with derived rotation periods are published for 86 other asteroids. These have varying degrees of reliability. Some cases with low amplitudes in which it is especially difficult to resolve ambiguities between a suggested period and 1/2, 3/2, or twice that amount are

labeled "A". Trojan asteroids investigated by French et al. are labeled "T". Finally, asteroids with second periods indicating a binary companion are labeled "B".

These lightcurves are of asteroids numbered 26, 31, 158, 319, 417, 453, 461, 498, 604, 644, 681, 730 A, 806, 814, 904, 933, 966, 1175, 1269, 1318, 1355 A, 1378, 1396, 1412, 1465, 1860, 2038, 2050, 2146 T, 2150, 2276, 2448, 2546, 2566, 2911, 3332, 3391 T, 3422, 4068 T, 4106, 4436 A, 4497, 4501 T, 4507, 4527, 4531, 4765 B, 4902 T, 5040, 5041 T, 5123, 5211, 5284 T, 5285 T, 5436 T, 5828 B, 5899 B, 6479, 6487, 6545 T, 8024, 8893, 11351 T, 12052 T, 13229 T, 15436 T, 15502 T, 15535 T, 15621, 18046 T, 19020 T, 19204, 19977, 21601 T, 24451 T, 24478, 26074 B, 33908, 40203, 41185 A, 68216, 70126, 88141, 94608, 125742, 152756, 163249.

Some of these provide secure period determinations and some only tentative ones. Some are of asteroids with no previous lightcurve photometry while others are of asteroids with previous period determinations which may be consistent or inconsistent with the earlier values.

The *Minor Planet Bulletin* is a refereed publication and that it is available online at <http://www.minorplanet.info/mpbdownloads.html>. Annual voluntary contributions of \$5 or more in support of the publication are welcome.

Please visit the ALPO Minor Planets Section online at <http://www.alpo-astronomy.org/minor>

Jupiter Section

Report by Richard W. Schmude, Jr., section coordinator
schmude@gdn.edu

Several individuals have imaged Jupiter in 2013. Ed Grafton submitted a couple of excellent images showing the Great Red Spot and both equatorial belts on

that planet. Jupiter had a nearly normal appearance in October. Jan Koet imaged a rare triple transit on October 13. I have received images from Jan Koet, Don Parker, Mike Hood, Gary Walker, Michel Jacquesson, Marc Delcroix, Trevor Barry, Manos Kardasis, James Willingham, Sean Walker, Chris Go and Vicky Go. I have received visual observations from Gianluigi, Brian Cudnik, Steve Gale and Detlev Niechoy.

This writer has begun measuring the brightness of Jupiter. Jupiter was close to its expected brightness on November 4.

The 2011-2012 apparition report has been submitted to two individuals for peer review. I am expecting this report to be published in early 2014. Once this report is published, I will start analyzing the data for the 2012-2013 apparition.

Visit the ALPO Jupiter Section online at <http://www.alpo-astronomy.org/jupiter>

Galilean Satellite Eclipse Timing Program

Report by John Westfall, program coordinator
johnwestfall@comcast.net

A reminder that a schedule of Galilean satellite eclipses for the new apparition is available on the Jupiter page of the ALPO website (<http://alpo-astronomy.org>). We welcome observers to send us their timings of these events, using the observing form also available on the webpage.

Contact John Westfall via regular mail at P.O. Box 2447, Antioch, CA 94531-2447 USA or e-mail to johnwestfall@comcast.net to obtain an observer's kit, also available on the Jupiter Section page of the ALPO website.



Inside the ALPO Member, section and activity news

Saturn Section

Report by Julius Benton,
section coordinator

jlbaina@msn.com

Saturn entered conjunction with the Sun on November 6, thereby ending the 2012-13 apparition. Observers should note that the planet should be favorably placed in the eastern sky before sunrise by the time you read this.

During the 2013-14 observing season, with the rings tilted about $+22^\circ$ toward Earth, the northern hemisphere of the globe and north face of the rings will be visible to better advantage than in several preceding apparitions. The following geocentric phenomena for 2013-14 apparition are presented for the convenience of readers for planning observations:

The accompanying table of geocentric phenomena for the upcoming 2013-14 apparition is presented for the convenience of readers who wish to plan their Saturn observing activities.

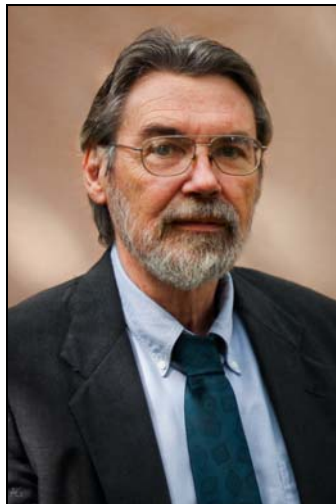
As of this update, observers have contributed over 700 images and drawings of Saturn for the 2012-13 apparition, and some have been quite impressive (see image accompanying this report). Imaging of multiple diffuse bright areas still occurred within the NTrZ in the aftermath of the great white North Tropical Zone (NTrZ) storm of 2010-11.

Bright spots have also been captured sporadically in the NTeZ and NNTeZ, as well as a recurring dark condensation just below the NTeZ near the north edge of the NTeB. Occasional small bright areas appeared in the EZn (Equatorial Zone, northern half) since mid-February, particularly obvious at IR wavelengths.

Of continuing interest have been amateur images of the remarkable hexagonal feature at Saturn's North Pole at different wavelengths. Views of the major ring components, including Cassini's and Encke's divisions, were much improved

Jupiter Section Staff Changes

Due to mounting work loads both professionally and personally, ALPO Board member and very active ALPO staff member Richard Schmude has decided to step down a bit to become assistant coordinator for the ALPO Jupiter Section, effective the end of this calendar year. He will continue to produce the sections Jupiter apparition reports.



Stepping up to become acting coordinator is assistant coordinator of the ALPO Jupiter Section Ed Grafton.

Ed joined the ALPO over 10 years ago, supporting the ALPO Jupiter Section; his primary observing targets are Jupiter, Saturn, Mars and Uranus. Says Ed: "I have always been interested in astronomy, even as a child when I had a 3-inch toy telescope. In the early 1980s, I became interested in astrophotography and began imaging the planets with a C8 and film. By the 1990s, CCDs began to become affordable to amateurs and I began experimenting with electronic imaging with my C14 backyard observatory."

Ed graduated from Louisiana State University in 1973 with a BS in electrical engineering, then spent the next three years supporting Marshall Space Flight Center in Huntsville Alabama, working with a team of engineers defining the re-entry dynamics footprint of the Space Shuttle's solid rocket boosters.

In 1976, he moved to Houston, Texas, supporting the Johnson Space Flight Center. The majority of the next 25 years, Ed worked with a team of 400 engineers building and reconfiguring the Space Shuttle Mission Simulator; the primary astronaut training tool for the Shuttle missions. His group's primary function was test and integration of the IBM-developed Shuttle's flight computers software. Ed is currently retired in Houston, pursuing his hobbies of astronomy, gardening and homemade radio projects.

Richard, who is a professor of chemistry at Gordon State College, Barnesville (near Atlanta), Georgia, and has authored three astronomy books for Springer Publishing, has been the ALPO Jupiter Section Coordinator from February 2001 until present.

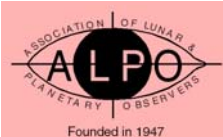
He started out on staff as the ALPO Remote Planets Section coordinator in November 1990 and joined the ALPO board in July 1999, serving twice as executive director (July 2003 to July 2005, and August 2009 to July 2011) and twice as associate executive director (August 2002 to August 2003, and July 2007 to August 2009).

He also served as acting assistant coordinator for the ALPO Historical Section from July 1999 through August 2000 and then as acting coordinator of that section from August 2000 to February 2001.

In addition, Richard also served as the ALPO Youth Program Coordinator from November 2000 to February 2001 and became an assistant coordinator (photometry and polarimetry) for the ALPO Mars Section in March 2004.

Finally, the ALPO Board has unanimously approved to dispense with the ALPO Jupiter Section scientific advisor positions.





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this apparition due to the favorable ring tilt toward Earth of roughly +18°.

Observers are alerted to keep watching and imaging Saturn carefully throughout the rest of the apparition and into the 2013-14 observing season for current and possible newly emerging activity in the northern hemisphere of the planet.

The observation programs conducted by the ALPO Saturn Section are listed on the ALPO Saturn Section web page at www.alpo-astronomy.org/saturn as well as in considerable detail in the author's book, *Saturn and How to Observe It*, available from Springer, Amazon.com, etc., or by writing to the ALPO Saturn Section for further information.

Observers are urged to carry out digital imaging of Saturn at the same time that others are imaging or visually watching Saturn (i.e., simultaneous observations). Although regular imaging of Saturn is extremely important and highly encouraged, far too many experienced observers have neglected making visual numerical relative intensity estimates, which are badly needed for a continuing comparative analysis of belt, zone, and ring component brightness variations over time. So, this type of visual work is strongly encouraged before or after imaging the planet.

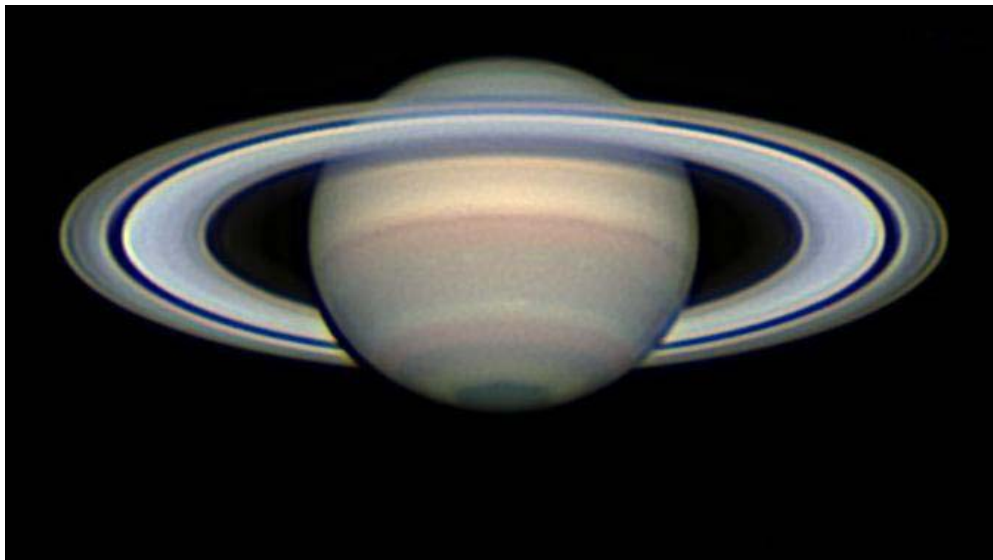


Image taken on April 15, 2013, at 16:20UT by Christopher Go observing from Cebu City, Philippines, using a 35.6cm (14.0 in.) SCT at RGB wavelengths. Notice the considerable detail on the globe of Saturn such as small white features within the NTrZ, an elongated white area in the NTeZ near the CM, as well as ring divisions at the ansae including Cassini's (A0 or B10), Encke's complex (A5), Keeler's (A8), and other "intensity minima" associated with the rings. Also notice the remarkable hexagonal feature at Saturn's North Pole. Seeing = 7.5, Transparency 3.0. Apparent diameter of Saturn's globe is 18.7" with a ring tilt of +18.2°. CMI = 298.4°, CMII = 19.9°, CMIII = 220.7°. S is at the top of the image.

The ALPO Saturn Section appreciates the dedicated work by so many observers who regularly submit their reports and images. *Cassini* mission scientists, as well as other professional specialists, are continuing to request drawings, digital images, and supporting data from

amateur observers around the globe in an active Pro-Am cooperative effort.

Information on ALPO Saturn programs, including observing forms and instructions, can be found on the Saturn pages on the official ALPO Website at www.alpo-astronomy.org/saturn

All are invited to also subscribe to the Saturn e-mail discussion group at Saturn-ALPO@yahoogroups.com

Remote Planets Section

Report by Richard W. Schmude, Jr.,
section coordinator
schmude@gordonstate.edu

Several individuals have made valuable observations of Uranus and Neptune in 2013. Christophe Pellier used a 0.25 m (10-in.) telescope to image albedo features on Uranus. He used a red and infrared filter to make his image. His image shows one of the polar regions

Geocentric Phenomena for the 2013-14 Apparition of Saturn in Universal Time (UT)

Conjunction	2013 Nov 6 ^d
Opposition	2014 May 10 ^d
Conjunction	2014 Nov 18 ^d
Opposition Data:	
Equatorial Diameter Globe	18.6 arc-seconds
Polar Diameter Globe	16.6 arc-seconds
Major Axis of Rings	42.2 arc-seconds
Minor Axis of Rings	15.5 arc-seconds
Visual Magnitude (m_v)	0.1 m_v (in Libra)
B =	+21.6°
Declination	-15.4°



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being brighter than the rest of the planet. His image also does not show limb darkening. Mark Delcroix and F. Colas used a telescope at Pic du Midi Observatory in France to image Neptune and its moon Triton. This image shows that the south polar region is brighter than the other visible areas of that planet. These two used an infrared filter. Jim Fox and the writer have also measured the brightness of Uranus.

The writer is currently working on a review of Uranus brightness measurements which will be submitted to a major professional journal in 2014. The brightness measurements which ALPO members have made over the years will help professional astronomers better understand seasonal changes on Uranus. There are also plans to write a similar review about Neptune.

A reminder that the book *Uranus, Neptune and Pluto and How to Observe Them* is available from Springer at www.springer.com/astronomy/popular+astronomy/book/978-0-387-76601-0 or elsewhere (such as www.amazon.ca/Uranus-Neptune-Pluto-Observe-Them/dp/0387766014) to order a copy.

Visit the ALPO Remote Planets Section online at www.alpoastronomy.org/remote.

Commentary & Opinion

Editor's Note: What follows are two communications related to the paper and sidebar commentary by Anthony Mallama which appeared in JALPO 55-4 (Autumn 2013). Each communication is followed by Mr. Mallama's own reply. Any subsequent comments on this subject should be addressed only to the pertinent individuals at the e-mail addresses provided.

Commentary #1

Congratulations on your superb paper in the Autumn, 2013, JALPO. Regarding Degenhardt's papers, he requested my images of Io in transit back in 2010. When I discovered the gist of his research, I pointed out that my processed images were of little worth and sent him my raw calibrated FTS images. I am not sure that he used these, since he mentions "processed" in his papers.

It should be pointed out, however, that even raw stacked images would be of little value in any kind of photometric work. While the webcams used by most planetary imagers produce stunning qualitative images, they are notoriously non-linear and therefore should not be employed for photometric studies. An example is the Jovian fireball imaged simultaneously by Anthony Wesley and Christopher Go on 3 June, 2010. This demonstrated how dedicated amateurs can contribute significantly to science. While such finds would be virtually impossible without webcams, fireball's true intensity could not be accurately ascertained — owing to the limitations of those very webcams. Such work can only be done with single-frame flat, dark, and bias-calibrated images produced by cooled CCD cameras of known linearity.

Your caveats on amateur science were quite timely and much appreciated. Amateurs make significant contributions but their work should be directed and monitored by professional mentors as occurs with the ALPO and AAVSO. The October 19-25, 2013, issue of *The Economist* had illuminating (and frightening!) articles reviewing problems in modern scientific research. One striking fact was that the results found in 50-75% of published papers could not be reproduced! Even peer review often proves to be inadequate. Perhaps one solution is to allow free critiques of papers in subsequent issues, such as we are doing here!

Thank you again for your input and advice.

Best regards,

Don Parker
ALPO Mars Section
park3232@bellsouth.net

Mr. Mallama's reply to Don Parker

Dear Don,

Thank you for your letter. The comments about your Jovian transit images used by the JEE lead author are very important. As you stated, there is no way to know what sort of 'processing' they underwent. I've received quite a few messages of support during my investigation into JEE and following the publication of my article. I am very glad to know that you and I also agree on most of the major points that I made.

Sincerely,

Tony Mallama

Commentary #2

Anthony Mallama published in JALPO Vol. 55, No. 4, pp 33-38 (Autumn 2013) an article "The Atmospheres of Io and Europa are Transparent." In this article, he presented strong evidence against the assertion by Degenhardt et al. (2010), (2013) that Io and Europa have dense atmospheres. In addition, he published an accompanying box, "When Amateur Science Goes Awry" (JALPO 55-4, p. 39). I can endorse the paper itself, but in my opinion, this box contains some inappropriate material.

In the pages of the JALPO, Mallama condemns the editors of the Proceedings for the 29th and 32nd annual conferences of the Society for Astronomical Sciences for not withdrawing some controversial papers. This is a conflict between Mallama and the editors of those Proceedings. The Proceedings are not associated in any way with the ALPO. Therefore, the ALPO cannot be held responsible for any



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material published in those Proceedings. I consider it inappropriate for Mallama to carry a personal conflict with the editors of the Proceedings into the pages of the JALPO.

Science is characterized as being falsifiable, and bad science is self-correcting. The hypothesis of dense atmospheres of Io and Europa by Degenhardt et al makes specific predictions which can be tested by observation, in this case by observational techniques already applied. Several different kinds of observations are presented by Mallama, all of which are contrary to the predictions by Degenhardt et al.

Now professional as well as amateur scientists make claims insufficiently supported by careful measurement. One spectacular recent case was by Pons and Fleischmann on cold fusion. As careful measurements by many other people failed to replicate the claims by Pons and Fleischmann, their claims have been falsified. No personal attacks were mounted, nor should they have been. The natural flow of scientific discussion was fully adequate to remove cold fusion from credibility.

An example from astronomy is by Adriaan van Maanen. Circa 1920, when evidence of the extragalactic nature of the spiral nebulae was accumulating, van Maanen published proper motions of individual stars in these nebulae which indicated greater-than-light-speed velocities if at extragalactic distances. Thus, van Maanen concluded the spiral nebulae are local. This assertion was vigorously disputed by Edwin Hubble, and in the subsequent years, van Maanen's proper motions could not be observed by others and were dismissed as spurious. Hubble, however, never engaged in a public diatribe against van Maanen or the editors of the journal in which he published.

The value of the "devil's advocate" in suggesting a controversial hypothesis should be properly appreciated. It forces people to make additional observations. Even in the case that the controversial hypothesis is not

supported, our confidence of the correctness of the previously accepted view is improved.

An outstanding example of a controversial hypothesis stimulating a useful re-examination is the steady-state cosmology by devil's advocates Holye, Burbidge, Burbidge, and Narlikar in the 1950's and 1960's. By now, almost everyone rejects the steady-state hypothesis, but this rejection is made believable only by the great volume of new and improved data obtained in the past 50 years.

Degenhardt et al have played the devil's advocates for the atmospheres of Io and Europa. Anthony Mallama cites strong evidence against this dense atmosphere hypothesis. Degenhardt's suggestion — even if it does not withstand observational scrutiny — should not be categorically censored.

Mallama has suggested that the authors of the Proceedings have not refereed this paper properly. The refereeing process is properly done in complete confidence, not *ex post facto* and in public, and not by an outsider who may disagree with the publication content. To attack in the JALPO the editorial policy of a journal in no way associated with the ALPO is improper and not in good taste. It is sufficient to state the evidence from which Mallama believes that authors Degenhardt et al. are mistaken in their hypothesis. While endorsing his paper, I feel that his box, "When Amateur Science Goes Awry," is ill-considered and inappropriate in a scientific discussion.

References

Degenhardt, S.; Aguirre, S.; Hoskinson, J.; Scheck, A.; Timerson, B.; Clark, D.; Redding, T.; and Talbot, J. (2010) "Io and Europa Atmosphere Detection through Jovian Mutual Events." In Proceedings for the 29th Annual Conference of the Society for Astronomical Sciences. Editors: B. D. Warner, J. Foote, and R. Buchheim, pp. 91-100. http://www.socastrosci.org/images/SAS_2010_Proceedings.pdf.

Degenhardt, S.; Gahrken, B.; Giacchini, B.; Iverson, E.; Scheck, A.; Timerson, B.; Miller, M.; Talbot, J.; and Trowbridge, D. (2013) "JEE 2012 observing campaign preliminary results" In Proceedings for the 32nd Annual

Conference of the Society for Astronomical Sciences. Editors: B. D. Warner, J. Foote, and R. Buchheim, pp. 9-16. http://www.socastrosci.org/images/SAS_2010_Proceedings.pdf.

Frederick Pilcher
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Mr. Mallama's reply to Frederick Pilcher

Dear Fred,

Thank you very much for your interest in the material that I published. I appreciate having the opportunity to clarify a few points.

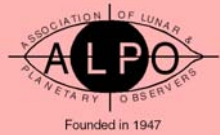
No one should think that I 'condemn' the editor of the SAS Proceeding. Brian Warner is a preeminent amateur astronomer with accomplishments and awards to prove it. I am sure we agree that Mr. Warner is a terrific scientist and a fine person.

Your defense of JEE as devil's advocate is mistaken though. An associate of the group states that the anomalous dimming in mutual event light curves (the JEE effect) can be turned on or off by adjusting the user parameters of their data reduction program. After detailing this in a message to the leader of the JEE group back in 2009 the associate wisely distanced himself from the project. The JEE group leader, on the other hand, continued to generate JEE anomalies. He is still promoting these specious results four years later.

Your comparison of the JEE controversy to the Steady State versus Big Bang theory debate is interesting. I won't go into the details about why I disagree but I offer the following analogy instead. In your area of minor planet research, the JEE hypothesis would be like claiming that asteroids are made of whale blubber.

In closing, I want to emphasize that if I caused any friction between the ALPO and the SAS it was unintentional. There is much commonality between the two organizations and I am certain that both will continue to promote excellence in amateur scientific research.

Sincerely, Tony Mallama



Inside the ALPO Member, section and activity news

Membership Report: Sponsors, Sustaining Members and Newest Members

by Matthew L. Will, ALPO Membership Secretary/Treasurer

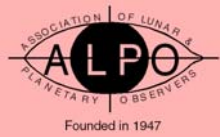
The ALPO wishes to thank the following members listed below for voluntarily paying higher dues. The extra income helps in maintaining the quality of the ALPO Journal while also strengthening our endowment. Thank you!

As of November 15, 2013:

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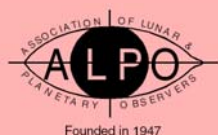
A special thank-you to Julius (Trey) L. Benton, III, John McAnally, Louise Olivarez, Don Parker, John and Elizabeth Westfall, and Thomas R. Williams their very generous contributions over the past year that have exceeded the Sponsor level.



Inside the ALPO Member, section and activity news

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Inside the ALPO Member, section and activity news

NEWEST MEMBERS...

The ALPO would like to wish a warm welcome to those who recently became members. Below are persons that have become new members from August 12, 2012, through November 15, 2013, their locations and their interest in lunar and planetary astronomy. The legend for the interest codes is located at the bottom of the page. Welcome aboard!

Member Name	City	State	Country	Interests
Atul Agrawal	Lafayette	CA		1, 2, 4, 5, 6, 7, 8, C, H, I
Dan Brown	Vidalia	GA		3, 5, 6, C, P, V
Morgan Cline	Lawrenceville	GA		
Dave Cooper	Avondale	AZ		
Robert Crews	Louisville	KY		5, 6, I
Wayne Donohoo	Elberfeld	IN		
Subes Emmanuel	Pouillon		France	
Theresa Fichera	Chicago	IL		
Mattia Galiazzo	Vienna		Austria	
Mitch Glaze	Erie	CO		
John Glover	Naperville	IL		0, 3, M
Kevin Halevan	Claremont	NH		
Scott Hallaron	Rochester	IL		
Kimberly Herman	Weatherford	TX		
Michael Hogan	Highland	IN		
Dan Holzemer	Long Beach	CA		0, 1, 2, 3, 4, 5, 6, C, E, M, S, X
Brandon Jordan	Rossville	TN		
Laquetta Karch	Fairfax	VA		
Robert Kelly	Oakdale	NY		
Ron Kramer	Las Cruces	NM		
Bruce Krobusek	Farmington	NY		
Cindy La Russa	Corona De Tucson	AZ		
Scott Lanham	Pearland	TX		
Douglas Liberati	Springfield	IL		
Maxwell C Loubenstein	Algonquin	IL		
Thomas Pennino	East Northport	NY		
William Porter	San Marcos	CA		
Francis Radican	Pittstown	NJ		
Frank R Santore	Escondido	CA		
Barrett Scott	Monore	GA		
Ken Sikes	Chandler	AZ		1, 2, 4, 5, 6, 7, A
Terry Smiljanich	Gainesville	FL		
Mary Solis	Danville	NH		
Thierry Speth	Nilvange		France	
Greg Spradlin	Mesa	AZ		
Tom Stifler	Cumming	GA		0, 3, 5, 6, E, S
Todd Strackbein	Naples	FL		
(Larry) Lawrence Trutter	Springfield	IL		
Ian Walker	Wiltshire		United Kingdom	
Brian D Warner	Eaton	CO		
Michael E Wilson	Lansing	MI		0, 2, 3, 5, 6, A, H, X
Paul Wren	Scottsdale	AZ		
Paul A Zeller	Indianapolis	IN		3, 5, A, C, M, P, X

Interest Abbreviations

0 = Sun	6 = Saturn	D = CCD Imaging	P = Photography
1 = Mercury	7 = Uranus	E = Eclipses	R = Radio Astronomy
2 = Venus	8 = Neptune	H = History	S = Astronomical Software
3 = Moon	9 = Pluto	I = Instruments	T = Tutoring
4 = Mars	A = Asteroids	M = Meteors	V = Videography
5 = Jupiter	C = Comets	O = Meteorites	X = Visual Drawing